

*dk*

*A2J*

WE CLAIM:

1. An interactive doll with an animated head and a base, the doll comprising:
  - a motor operatively connected to the head, the head rotatable relative to the base through a plurality of predetermined positions including a first head position;
  - a head position assembly interposed between the head and the base, the head position assembly having a contact surface; and
  - a position monitoring structure attached to the head, wherein the position monitoring structure is positioned such that the contact surface of the head position assembly triggers the position monitoring structure when the head is in the first head position.
2. The doll of claim 1, wherein the head position assembly comprises a safety mechanism adapted to permit the head to be physically turned.

- RECEIVED  
FEB 20 2004  
U.S. PATENT AND TRADEMARK OFFICE
3. The doll of claim 1, wherein the head position assembly comprises:  
a lower wafer interposed between the head and the base adapted to follow the rotation of  
the head when the head is physically turned from an operational position;  
an upper wafer releasably coupled to the lower wafer and adapted to remain  
aligned with the base when the head is physically turned from the  
operational position; and  
a biasing structure interposed between the lower wafer and upper wafer wherein  
the biasing structure is adapted to bias the head back to the  
operational position after being physically turned.
4. The doll of claim 1, wherein the head position assembly comprises a  
stopping surface which is adapted to contact a stop on the head to prevent the head  
from being physically turned beyond the plurality of positions.
5. The doll of claim 1, wherein the position monitoring structure  
includes at least one limit switch.
6. The doll of claim 1, wherein the position monitoring structure is  
operatively attached to a processor which is adapted to control rotation of the  
head.

7. An animated doll comprising:
- a body;
- a first body part movable relative to the body having a first motor operatively connected to the first body part, the first body part movable at least between a first position at which a first limit switch is triggered and a second position at which a second limit switch is triggered; and
- a second body part movable relative to the first body part having a second motor operatively connected to the second body part, the second body part movable at least between a first position at which a third limit switch is triggered and a second position at which a fourth limit switch is triggered.
8. The doll of claim 7, wherein the first body part is a head.
9. The doll of claim 7, wherein the second body part is an eyelid.
10. The doll of claim 7, wherein the first motor and second motor are both contained in the first body part.
11. The doll of claim 7, also comprising a processor adapted to control motion of the first body part and the second body part.

12. The doll of claim 7, wherein each limit switch actuates a position signal to a processor.

13. The doll of claim 7, wherein the first body part moves independently of the second body part.

14. An interactive doll comprising:

a body;

a head rotatably mounted on the body, where rotation of the head to a predetermined location triggers a head limit switch;

an eye assembly including moveable eyelids attached to the head movable between a closed position and an opened position where a first eyelid limit switch is triggered in the opened position and a second eyelid limit switch is triggered in the closed position; and

a processor operatively connected to the head limit switch, the first eyelid limit switch, and the second eyelid limit switch, wherein the processor is configured to control the position of the head and eyelids.

15. The doll of claim 14, also comprising:

a head motor operatively coupled to the head and adapted to rotate the head relative to the body about a longitudinal axis of the doll; and

a power assembly coupled to the body and adapted to drive the head motor.

*Sub*

16. The doll of claim 14, also comprising:

an eye assembly motor operatively coupled to the eye assembly and positioned in the head, wherein the eye assembly motor is adapted to move the eyelids; and

a power assembly coupled to the body and adapted to drive the eye assembly motor.

*Sub*

17. The doll of claim 14, also comprising a base adapted to support the doll on a surface in an upright orientation.

*Sub*

18. An animated doll comprising:

a base configured to disguise a power source;

a body mounted on the base having a size that is not in proportion to the base; and

*Sub*

a motor driven head rotatably mounted on the body configured to disguise a motor assembly which is operatively connected to the power source and the head and having a size that is not in proportion to the body size.

*Sub*

19. The doll of claim 18, wherein the motor assembly includes a first motor configured to rotate the head relative to the body.

*Dub*  
*B1*

20. The doll of claim 18 also comprising an eye assembly having moveable eyelids, wherein the motor assembly includes a second motor configured to move the eyelids between an open position and a closed position.

*Dub*  
*A4*

21. The doll of claim 18, also comprising a head position assembly interposed between the head and the body wherein the head rotates about the head position assembly and the head position assembly remains generally stationary in relation to the body when in an operation position.

*Dub*  
*BX*

22. The doll of claim 21, wherein the head includes a position monitoring structure attached to the head and configured to contact the head position assembly when in a predetermined position.

*Dub*  
*AST*

23. The doll of claim 21, wherein the head position assembly includes a biasing structure adapted to permit the head to be physically turned beyond the operation position and to bias the head back to the operation position.

*Dub*  
*B1*

24. The doll of claim 18, wherein the base is adapted to provide a counter-weight to support the head.

*Dub*  
*B1*

25. The doll of claim 18, wherein the base is adapted to support the doll on a planar surface in an upright orientation.

*Sub  
B1*

26. An interactive doll capable of producing plural differentiated responses, the doll comprising:

a communications port operatively coupled to the doll and adapted to removably receive external components;

a processor operatively coupled to the communications port in the doll and adapted to identify and select at least one predetermined response associated with an attached component; and

a power assembly operatively coupled to the doll and adapted to provide power to the processor.

27. The doll of claim 25, wherein the communications port is on a hand of the doll.

28. The doll of claim 26, wherein the external components are a plurality of hand-held devices sized for the hand of the doll.

29. The doll of claim 25, wherein the communications port is on a torso of the doll.

*Sub  
B1*

30. The doll of claim 29, wherein the external components are a plurality of removable clothing sized to fit the doll.

- bulk*
- #61*
31. The doll of claim 25, wherein the predetermined response includes a pre-recorded speech emitted by a speaker coupled to the doll.
32. The doll of claim 25, also comprising a motor driven rotatable head operatively attached to a motor coupled to the power assembly, wherein the predetermined response includes rotation of the head.
33. The doll of claim 25, also comprising an eye assembly having motor driven moveable eyelids operatively attached to a motor coupled to the power assembly, wherein the predetermined response includes movement of the eyelids.